

Catalogue of American Amphibians and Reptiles.

DUELLMAN, WILLIAM E. 1968. *Smilisca sordida*.

***Smilisca sordida* (Peters)
Costa Rican *smilisca***

Hyla sordida Peters, 1863:460. Type-locality, "Veragua." Presumably the type was obtained in the mountainous regions of Veraguas Province, Panamá. Syntypes, Zoologisches Museum Berlin 3141 (2 specimens), adult males collected by J. von Warzewicz.

Hyla gabbii Cope, 1876:103. Type-locality, "near Sipurio," Limón Province, Costa Rica, elevation 60 meters. Syntypes, U. S. Natl. Mus. 30658-9, adult females collected by William M. Gabb.

Hyla nigripes Cope, 1876:104. Type-locality, "Pico Blanco," Limón Province, Costa Rica. Knowledge of the route taken by Gabb and of the distribution of this species favors the type-locality being on the north slope of Pico Blanco at an elevation of less than 1200 meters. Syntypes, U. S. Natl. Mus. 30685-6 collected by William M. Gabb.

Hyla salvini Boulenger, 1882:372. Type-locality, "Cartago [Cartago Province], Costa Rica," elevation 1470 meters. Syntypes, British Mus. Nat. Hist. 1947.2.24.12, collected by Osbert Salvin, and 1947.2.24.13, collected by Jansen.

Smilisca gabbii: Starrett, 1960:303. Transfer of *Hyla gabbii* Cope to *Smilisca*.

Smilisca sordida: Duellman and Trueb, 1966:323. Transfer of *Hyla sordida* Peters to *Smilisca*, and synonymy of *Hyla gabbii* Cope, *Hyla nigripes* Cope, and *Hyla salvini* Boulenger with *Smilisca sordida*.

- CONTENT. No subspecies are recognized.

- DEFINITION AND DIAGNOSIS. A moderate-sized *Smilisca*—males attain snout-vent lengths of 45 mm, and females reach a maximum size of 64 mm. The snout is rounded in dorsal profile and variable in lateral profile. The diameter of the tympanum is about one-half that of the eye, and the lips are thin and flaring. The tarsal fold is weak but extends the full length of the tarsus. The inner metatarsal tubercle is long, low, flat, and elliptical. The fingers are one-half webbed; the toes are four-fifths webbed. The skull is slightly wider than long and has a large, elongate frontoparietal fontanelle, but lacks supraorbital flanges. The squamosal is small and not in contact with the maxillary. The bony section of the ethmoid does not extend between the nasals, but terminates just anterior to the anterior edge of the orbit. The dorsal ground color is gray to pale tan or reddish brown; the venter is white. The dorsum is variously marked with dark gray, dark brown, reddish brown or olive green spots or blotches. A dark interorbital bar usually is present. The dorsal markings on the body usually consist of a blotch, or two or more spots, in the scapular region and in the sacral region. In many specimens, especially females, these markings are in the form of broad transverse bars. The limbs are marked by dark brown transverse bars. The flanks

and posterior surfaces of the thighs are dark brown with bluish white and creamy tan flecks respectively. There is no white labial stripe, and the iris is creamy silver to bronze with a variable amount of black flecking. Breeding males have white throats.

Tadpoles have long tails (about twice the length of the body) with a series of reddish brown dashes on the dorsal surface. The large ventral mouth is completely bordered by two rows of papillae. The inner surface of the upper beak does not form a continuous arch with the lateral processes.

The combination of half-webbed fingers, diameter of tympanum about one-half that of eye, brown flanks with bluish white flecks, brown posterior surfaces of thighs with creamy tan flecks, no white labial stripe, and white throat in breeding males distinguish *Smilisca sordida* from other members of the genus. Blue spots are present on the flanks of *S. cyanosticta* and *S. sila*. The former is a larger (males 56 mm; females 70 mm) species having a white labial stripe and a large dark brown postorbital mark. In *S. sila*, the snout is short and truncate, the lips are thick and not flaring, and the throat in breeding males is dark gray or brown. The tadpoles of *S. sordida* differ from all other species of *Smilisca* by having long tails and two complete rows of labial papillae. The only other *Smilisca* having long-tailed tadpoles is *S. sila*; in this species the median part of the upper lip is bare, and the rest of the mouth is bordered by one row of papillae. Of other hylids that occur sympatrically with *S. sordida*, only *Hyla legleri* has tadpoles resembling those of *S. sordida*. The tadpole of *Hyla legleri* has a proportionately longer tail and a much larger mouth with 3/5 tooth rows.

- DESCRIPTIONS. Taylor (1952) gave a detailed description of an adult from San Isidro el General, Costa Rica. Duellman and Trueb (1966) described adults, young, tadpoles, skull, and breeding call. The call consists of one to six vibrant rattling notes. The duration of each note varies from 0.18 to 0.45 seconds. The calls are repeated at intervals of 12 seconds to several minutes. The notes have 78 to 135 pulses per second, and the two most emphasized frequencies are at about 1200 and 2600 cycles per second.

- ILLUSTRATIONS. For photographs of adults see Taylor (1952) and Duellman and Trueb (1966). The latter also illustrated the hands, feet, lateral view of head, tadpole, and larval mouthparts, and provided an audiospectrogram.

- DISTRIBUTION. *Smilisca sordida* occurs on the Pacific slopes and lowlands from northern Guanacaste, Costa Rica, southeastward to extreme western Panamá, to elevations of about 1200 meters on the Meseta Central in Costa Rica. It also occurs on the Caribbean slopes and lowlands of Costa Rica and presumably also in western Panamá. One specimen

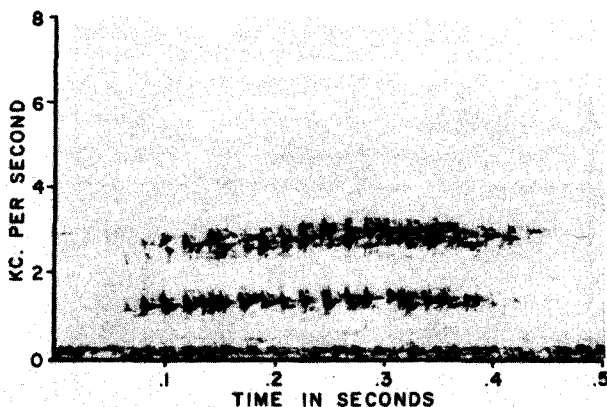
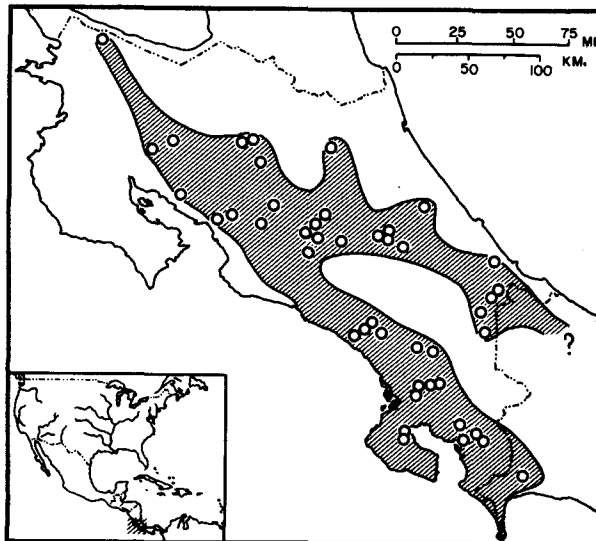


FIGURE. Audiospectrogram (narrow band, 40 cycles per second) of the mating call of *Smilisca sordida*: San José Province, Costa Rica, 18 February 1965, air 20.6°C. (Univ. Kansas Mus. Nat. Hist. Tape No. 398; specimen No. 91825.)



MAP. Symbols show known localities; the type-locality is not sufficiently precise to be plotted. The shading indicates the presumed range; the question mark indicates an uncertain range boundary.

purportedly comes from "Río Grande, Nicaragua." The distribution of this species seems to be dependent upon the presence of rocky streams having low gradients, which are utilized for breeding.

• Fossil Record. None.

• PERTINENT LITERATURE. Duellman and Trueb (1966) summarized all previous literature on this species and provided a list of all specimens and locality records known at that time.

• REMARKS. Except for their inclusion in various checklists and other compendia, the names of *Hyla sordida*, *H. gabbii*, *H. nigripes*, and *H. salvini* have been used infrequently in herpetological literature. Noble (1924), Dunn (1931), and K. P. Schmidt (1933) used *Hyla gabbii* in reference to the species now known as *Smilisca sila*; Dunn (1937), Cooper (1944), and Breder (1946) used *Hyla sordida* in reference to *Smilisca sila*.

Duellman and Trueb (1966) examined the type specimens of the species contained in the synonymy of *S. sordida* and provided evidence that all the types probably represent a single species.

The vernacular name, Costa Rican smilisca, is proposed for this species, which is an abundant and characteristic member of the Costa Rican herpetofauna.

• ETYMOLOGY. The name *sordida* apparently refers to the dull grayish brown dorsal color of many preserved specimens and is derived from the Latin *sordidus* meaning dirty.

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